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	Bessel.	Conn. des Temps.	Conn. des Temps, alt^d.
86	703·63	708·80	706·85
87	860·26	868·73	866·35
88	1095·80	1103·09	1100·07

Dr. Drew exhibited a series of astronomical diagrams, representing various celestial objects, such as the phases of the planets, the craters in the moon, clusters of stars, nebulæ, &c., executed from the drawings of Mr. De La Rue, Lord Rosse, Sir John Herschel, and other original sources, and adapted to the lecture-room. The nebulæ and double-stars were depicted on a blue ground, which produced a pleasing effect.

Note on Comet II. 1855. By Dr. Donati.

In this Note Dr. Donati first gives parabolic elements of Comet II. 1855, and then assigns elliptic elements which he deduced from four positions of the comet by the aid of a method recently devised by Mossotti. The following are the positions which served as the basis of calculation; they are reduced to the mean equinox of Jan. 1, 1855, and corrected for aberration and parallax:—

Florence M.T.	R.A.	Decl.
	° ′ ″	° ′ ″
1855, Jan. 3·41956	100 17 2·8	+36 19 42·0
5·44491	107 49 57·1	36 15 48·9
11·42931	121 9 45·1	34 39 36·1
17·41726	127 23 38·8	+33 2 16·1

From these positions the following elliptical elements were deduced:—

Passage of the Perihelion, 1855, May 30·232563 Florence M.T.

	° ′ ″	
Longitude of the Ascending Node......	260 15 7·3	Mean Equinox, 1855·0.
Longitude of the Perihelion	282 54 12·7	
Inclination	156 52 51·6	
Perihelion Distance........................	0·5678239	
Excentricity.........	0·9909006	

whence

Semi-major Axis	62·40234
Time of Revolution......	492·95 years.

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"The inclination greater than 90° indicates that the heliocentric motion of the comet is *retrograde.* Employing the usual mode of distinction we should have

	°	′	″
Longitude of the Perihelion ……	237	36	1·9
Inclination ………………………	23	7	8·4

"The following is a comparison between the positions calculated from the foregoing elliptic elements and the fundamental positions employed in computing the orbit:—

	Obs.—Theory.	
	R.A.	Decl.
	″	″
June 3	−5·2	−5·9
5	+9·8	+6·4
11	+1·4	−2·1
17	+1·8	+0·9

"After having obtained these results, I searched in the Catalogue of Comets contained in Delambre's Astronomy with the view of ascertaining whether 493 years back (conformably to the ellipse which I deduced) a comet had pursued a path similar to that of Comet II. of the present year; and I was surprised to find that precisely in the year 1362 a comet had appeared, the motion of which was *retrograde*, and for which Burckhardt had calculated the following two orbits:—

Orbit I.

Passage of the Perihelion, 1362, March 11·208 Paris M.T.

Longitude of the Ascending Node ……	249°
Longitude of the Perihelion ……………	219
Inclination ………………………………	21
Perihelion Distance ……………………	0·4558

Orbit II.

Passage of the Perihelion, 1362, March 2·333 Paris M.T.

Longitude of the Ascending Node ……	237°
Longitude of the Perihelion ……………	227
Inclination ………………………………	32
Perihelion Distance ……………………	0·4700

"These two orbits may be considered as the limits of the true orbit described by the Comet of 1362, of which merely gross observations were made.

"If we institute a comparison between the elements of Comet II. of this year and those of the Comet of 1362, we shall find that the two orbits sufficiently resemble each other.

"It must be borne in mind, however, that the orbit of the Comet of 1362 is uncertain, and that, if I have obtained for the second Comet of 1855 a period of 493 years, this result cannot be

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considered as an absolute determination, since the small arc through which it has been possible to observe the comet may easily be made to coincide with ellipses of widely different excentricities.

"However, the coincidence of the period and the resemblance of the two orbits appear to me to render it, if not absolutely certain, at least extremely probable, that the second Comet of 1855 is identical with that of 1362."

Elements of Fides. By M. George Rümker.

(*Communicated by Professor Challis.*)

	°	′	″	
M ……	322	17	40·3	1855, Nov. 0·0 G.M.T.
ϖ ……	63	26	6·9	Mean equinox, Jan. 0·0 1856.
☊ ……	8	8	56·2	
i ……	3	11	43·6	
φ ……	8	22	25·8	
Log *a* …	0·415680			
Log μ …	2·966487			

These elements were computed from observations at Bilk, Oct. 6; Berlin, Oct. 23; and Hamburg, Nov. 2 and 13.

On certain Appearances connected with the Zodiacal Light.

By Baron Humboldt.[*]

"In Gould's valuable American *Astronomical Journal* (No. lxxxiv., May 26, 1855), there appears a letter from the Rev. Mr. Jones, chaplain of the frigate Mississippi, containing, as the result of his observations of the Zodiacal Light in the seas of China and Japan, the conjecture of a second radiating ring of light having a relation to the moon. This conjecture is founded upon the *extraordinary spectacle of the Zodiacal Light simultaneously observed at both east and west horizons from eleven to one o'clock*, during several days in succession. As I observed something analogous fifty-two years ago in the Southern Ocean during the voyage of forty days from Callao, in Peru, to the port of Acapulco in Mexico, and have given only a very brief account of it in the astronomical part of my *Cosmos*, it may not be uninteresting to the members of the Academy if I laid before them an extract from my French Journal, written at sea, relating to this phenomenon, which hitherto has not formed the subject of any detailed remarks. The Zodiacal Light, and the difficult question whether we ought to attribute to a physical cause existing beyond our atmosphere the remarkable variations of light which it undergoes, while in tropical nights the smallest stars exhibit the same brightness to the naked eye, were

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[*] Monatsbericht der Kön. Preuss. Akademie der Wissenschaften, Juli, 1855.